

**Report Date:** 09 Jun 2014

**Summary Report for Individual Task**  
**552-816-3103**  
**TROUBLESHOOT THE AVIATION GROUND POWER UNIT (AGPU)**  
**Status: Approved**

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**Distribution Restriction:** Approved for public release; distribution is unlimited.

**Destruction Notice:** None

**Foreign Disclosure: FD5** - This product/publication has been reviewed by the product developers in coordination with the FT EUSTIS / 128 AVN BDE foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

**Condition:** You are the maintenance supervisor of a pneudraulic repair shop scheduled to deploy to an operational area. You have received a work order onan Aviation Ground Power Unit (AGPU) with a fault that requires troubleshooting. You have full access to a maintenance facility/hangar, maintenance personnel, tools/special tools, parts, materials, equipment, applicable references, forms and records. This task should not be trained in MOPP 4.

**Standard:** Supervise troubleshooting of the AGPU until it is returned to an operational status IAW TM 1-1730-229-13. Apply quality control procedures and maintenance management skills. Ensure forms and records are completed IAW DA Pam 738-751.

**Special Condition:** None

**Safety Risk:** Low

**MOPP 4:** Never

Task Statements
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**Cue:** None

DANGER

None

WARNING

None

CAUTION

None

**Remarks:** None

**Notes:** For current update on technical manuals refer to DA PAM 25-30. <http://www.army.mil/usapa/2530.html>. Comply with all shop and flight line safety procedures.

## WARNING

**DEATH** - Death or severe burns may result if personnel fail to observe safety precautions. Do not operate the AGPU until the ground stud has been connected to a suitable ground. Disconnect the battery connector prior to removing and installing components. Remove all rings, watches and other jewelry when performing maintenance on this equipment. Do not attempt to service or otherwise make any adjustments, connections or re-connections of wires or cables until AGPU is shut down and completely de-energized. Never connect or disconnect power cables with AC or DC energized.

**HIGH VOLTAGE** - High voltage is produced when this AGPU is in operation.

**ACCESS DOORS** - Open access doors may be blown shut if AGPU is operated in close proximity to hovering or taxiing aircraft.

**HIGH TEMPERATURE HYDRAULIC FLUID** - If 240 °F light on Hydraulic Control Panel illuminates, reduce output pressure and allow fluid to cool until 240 °F light goes off and 160 °F light illuminates. When hydraulic system temperature reads 275 °F, the HIGH TEMP light will come on and hydraulic output will stop. Unexpected hydraulic output stoppage will cause damage to the aircraft and personnel.

**HYDRAULIC FLUID** - Hydraulic fluid under high pressure is generated (up to 3300 psi) as a result of operation of the AGPU. Do not expose any part of the body to a high pressure leak in the hydraulic system. Never attempt to connect or disconnect hydraulic fittings under high pressure. Ensure that hoses are in good condition, not kinked and securely connected to aircraft prior to applying hydraulic power. Wear gloves and eye protection (goggles or face shield) when operating hydraulic systems.

**EXTREMELY HOT AIR** - Extremely hot air under pressure is generated by the AGPU pneumatic system. Allow pneumatic hose and fitting to cool before touching. Wear gloves and eye protection (goggles or face shield) when operating pneumatic system. Never set PNEUMATIC POWER switch to ON unless pneumatic hose fitting is securely attached to aircraft. The hose will attempt to straighten out with power applied and whip around violently if not securely attached to aircraft.

**NOISE** - Operating level of this generator can cause hearing damage. Ear protectors, as recommended by the medical or safety officer, must be worn when working near the AGPU. Require all personnel within 9.1 meters of the AGPU to wear Army approved hearing protectors, earplugs or noise muffs, when the turbine engine is operating.

## CAUTION

If engine exhaust is gray fog during the starting procedure and the GTE EGT meter does not show an increase, set the ENGINE CONTROL switch to STOP. Do not attempt to restart until problem is resolved. Excessive fuel could cause booming or flaming start and damage engine.

**Starter Duty Cycle.** Observe the following:

Never attempt to start until engine has completely stopped turning. Starter/gearbox assembly damage may result.

**Unsuccessful Start Attempts.** Three consecutive attempts (30 seconds each maximum) are allowed. After three attempts, wait a minimum of 20 minutes for starter to cool down before a fourth attempt. Notify your supervisor if engine will not start in four attempts.

**Successive Starts.** Six successive starts in a one hour period at 10 minute intervals are allowed. After this period, one hour starter cool-down time is required.

Set the ENGINE CONTROL switch to STOP to prevent damage to AGPU if any of the following occurs:  
BATTERY STARTER CURRENT meter reads more than 800 amps after initial cranking.

GTE RPM meter appears hung up at some speed below 95%. GTE EGT meter reads above 1600 °F for more than 30 seconds. GTE STARTER ON light illuminated for more than 30 seconds.

GTE EGT meter reads abnormally low (500 °F or below) with no load.

ECU may have a malfunction which could result in severe damage to engine when load is applied. OUTPUT PRESSURE gauge on hydraulic control panel does not indicate a minimum of 450-500 psig immediately after engine start (unless hydraulic pump spacer is installed).

Hydraulic pump will be damaged if run without hydraulic fluid pressure. Immediately shut down engine.

Unusual noises heard.

Fuel or oil leakage observed.

1. Review work request and all applicable forms and records IAW DA Pam 738-751.
2. Evaluate maintenance repair task steps for safety concerns, required maintenance personnel, resources and equipment preconditions IAW TM 1-1730-229-13, Chapters 3 and 4.
3. Supervise operation checks to identify the maintenance required to troubleshoot the AGPU IAW TM 1-1730-229-13, Chapters 2 and 3.
4. Supervise maintenance repair procedures IAW TM 1-1730-229-13, Chapter 4.
5. Supervise maintenance operation checks to confirm the troubleshooting of the AGPU IAW TM 1-1730-229-13, Chapter 2.
6. Verify accuracy of completed forms and records in accordance with DA Pam 738-751.
7. Ensure the work area is policed of any foreign object debris.
8. Ensure a Technical Inspector (TI) is requested during all appropriate maintenance steps.

(Asterisks indicates a leader performance step.)

**Evaluation Guidance:** Score the Soldier a GO if all performance measures are passed (P). Score the Soldier a NO GO if any performance measure is failed (F). If the Soldier scores a NO GO, show the Soldier what was done wrong and how to do it correctly.

**Evaluation Preparation:** Set-up: Provide an AGPU with a malfunction/deficiency that requires troubleshooting. Provide sufficient maintenance personnel, special tools/tools/equipment, and materials to facilitate troubleshooting and maintenance.

**Brief Soldier:** Inform the Soldier to supervise the troubleshooting and maintenance of the AGPU. The AGPU should be returned to an operational status.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Reviewed work request and checked all applicable forms and records.			
2. Evaluated maintenance repair task steps for safety concerns, required maintenance personnel, resources and equipment preconditions.			
3. Supervised operation checks to identify the maintenance required to troubleshoot the AGPU.			
4. Supervised maintenance repair procedures.			
5. Supervised maintenance operation checks to confirm the troubleshooting of the AGPU.			
6. Ensured completion of forms and records in accordance with DA Pam 738-751.			
7. Supervised the policing of the aircraft and work area for Foreign Object Damage (FOD).			
8. Ensured a Technical Inspector (TI) was requested during all appropriate maintenance steps.			

**Supporting Reference(s):**

Step Number	Reference ID	Reference Name	Required	Primary
1.	DA PAM 738-751	FUNCTIONAL USERS MANUAL FOR THE ARMY MAINTENANCE MANAGEMENT SYSTEM- AVIATION (TAMMS-A)	Yes	Yes
1.	TM 1-1500-204-23-2	AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL FOR GENERAL AIRCRAFT MAINTENANCE (PNEUDRAULICS MAINTENANCE AND PRACTICES) VOLUME 2 (REPRINTED W/BASIC INCL C1-3) (THIS	Yes	No
1.	TM 1-1730-229-13	Operator and Field Maintenance Manual for Power Unit, Aviation, Multi-Output GTED Electrical, Hydraulic, Wheel Mounted, Self-Propelled, Towable - MEP 83-60A, MEP 83-360D, MEP 83-60E {TO 35C2-3-473-1} (This item is included on EM 0171)	Yes	No
1.	TM 1-1730-229-24P	FIELD AND SUSTAINMENT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST FOR POWER UNIT, AVIATION, MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE (THIS ITEM IS INCLUDED ON EM 0171)	Yes	No
1.	TM 1-1730-229-40	SUSTAINMENT MAINTENANCE MANUAL FOR POWER UNIT AVIATION MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE AC - 400 HZ,	Yes	No
2.	DA PAM 738-751	FUNCTIONAL USERS MANUAL FOR THE ARMY MAINTENANCE MANAGEMENT SYSTEM- AVIATION (TAMMS-A)	Yes	No
2.	TM 1-1500-204-23-2	AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL FOR GENERAL AIRCRAFT MAINTENANCE (PNEUDRAULICS MAINTENANCE AND PRACTICES) VOLUME 2 (REPRINTED W/BASIC INCL C1-3) (THIS	Yes	No
2.	TM 1-1730-229-13	Operator and Field Maintenance Manual for Power Unit, Aviation, Multi-Output GTED Electrical, Hydraulic, Wheel Mounted, Self-Propelled, Towable - MEP 83-60A, MEP 83-360D, MEP 83-60E {TO 35C2-3-473-1} (This item is included on EM 0171)	Yes	Yes
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2.	TM 1-1730-229-40	SUSTAINMENT MAINTENANCE MANUAL FOR POWER UNIT AVIATION MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE AC - 400 HZ,	Yes	Yes
3.	DA PAM 738-751	FUNCTIONAL USERS MANUAL FOR THE ARMY MAINTENANCE MANAGEMENT SYSTEM- AVIATION (TAMMS-A)	Yes	No
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4.	TM 1-1500-204-23-2	AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL FOR GENERAL AIRCRAFT MAINTENANCE (PNEUDRAULICS MAINTENANCE AND PRACTICES) VOLUME 2 (REPRINTED W/BASIC INCL C1-3) (THIS	Yes	No
4.	TM 1-1730-229-13	Operator and Field Maintenance Manual for Power Unit, Aviation, Multi-Output GTED Electrical, Hydraulic, Wheel Mounted, Self-Propelled, Towable - MEP 83-60A, MEP 83-360D, MEP 83-60E {TO 35C2-3-473-1} (This item is included on EM 0171)	Yes	Yes
4.	TM 1-1730-229-24P	FIELD AND SUSTAINMENT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST FOR POWER UNIT, AVIATION, MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE (THIS ITEM IS INCLUDED ON EM 0171)	Yes	Yes

4.	TM 1-1730-229-40	SUSTAINMENT MAINTENANCE MANUAL FOR POWER UNIT AVIATION MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE AC - 400 HZ,	Yes	Yes
5.	TM 1-1500-204-23-2	AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL FOR GENERAL AIRCRAFT MAINTENANCE (PNEUDRAULICS MAINTENANCE AND PRACTICES) VOLUME 2 (REPRINTED W/BASIC INCL C1-3) (THIS	Yes	No
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5.	TM 1-1730-229-24P	FIELD AND SUSTAINMENT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST FOR POWER UNIT, AVIATION, MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE (THIS ITEM IS INCLUDED ON EM 0171)	Yes	No
5.	TM 1-1730-229-40	SUSTAINMENT MAINTENANCE MANUAL FOR POWER UNIT AVIATION MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE AC - 400 HZ,	Yes	No
6.	DA PAM 738-751	FUNCTIONAL USERS MANUAL FOR THE ARMY MAINTENANCE MANAGEMENT SYSTEM- AVIATION (TAMMS-A)	Yes	Yes
6.	TM 1-1500-204-23-2	AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL FOR GENERAL AIRCRAFT MAINTENANCE (PNEUDRAULICS MAINTENANCE AND PRACTICES) VOLUME 2 (REPRINTED W/BASIC INCL C1-3) (THIS	Yes	No
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6.	TM 1-1730-229-40	SUSTAINMENT MAINTENANCE MANUAL FOR POWER UNIT AVIATION MULTI-OUTPUT GTED ELECTRICAL, HYDRAULIC, PNEUMATIC (AGPU) WHEEL MOUNTED, SELF-PROPELLED, TOWABLE AC - 400 HZ,	Yes	No
7.	TM 1-1500-204-23-2	AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL FOR GENERAL AIRCRAFT MAINTENANCE (PNEUDRAULICS MAINTENANCE AND PRACTICES) VOLUME 2 (REPRINTED W/BASIC INCL C1-3) (THIS	Yes	No
8.	DA PAM 738-751	FUNCTIONAL USERS MANUAL FOR THE ARMY MAINTENANCE MANAGEMENT SYSTEM- AVIATION (TAMMS-A)	Yes	No
8.	TM 1-1500-204-23-2	AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL FOR GENERAL AIRCRAFT MAINTENANCE (PNEUDRAULICS MAINTENANCE AND PRACTICES) VOLUME 2 (REPRINTED W/BASIC INCL C1-3) (THIS	Yes	No
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**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. Handle, use, store, and dispose of hazardous materials and hazardous waste (e.g. chemicals, cleaning solvents, contaminated materials, etc.) in accordance with the Material Safety Data Sheets (MSDS), unit SOP requirements and all federal, state, local, and Army regulations.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and

water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Low Risk: Personnel must comply with all TMs and TBs, WARNINGS, CAUTIONS, and NOTES, applicable ARs, unit safety policies and procedures, shop safety practices, and risk assessment control measure.

**Prerequisite Individual Tasks :**

<b>Task Number</b>	<b>Title</b>	<b>Proponent</b>	<b>Status</b>
552-918-6001	OPERATE THE AVIATION GROUND POWER UNIT (AGPU) (AVN)	552 - Aviation Logistics (Individual)	Approved

**Supporting Individual Tasks :** None

**Supported Individual Tasks :**

<b>Task Number</b>	<b>Title</b>	<b>Proponent</b>	<b>Status</b>
552-801-4006	SUPERVISE HYDRAULIC SHOP OPERATIONS	552 - Aviation Logistics (Individual)	Approved
552-15K-0002	MANAGE HYDRAULIC SHOP OPERATIONS	552 - Aviation Logistics (Individual)	Proposed

**Supported Collective Tasks :** None

**ICTL Data :**

<b>ICTL Title</b>	<b>Personnel Type</b>	<b>MOS Data</b>
Critical Task List for Military Occupational Specialty (MOS) 15H (SL3)	Enlisted	MOS: 15H, Skill Level: SL3, Duty Pos: RCU